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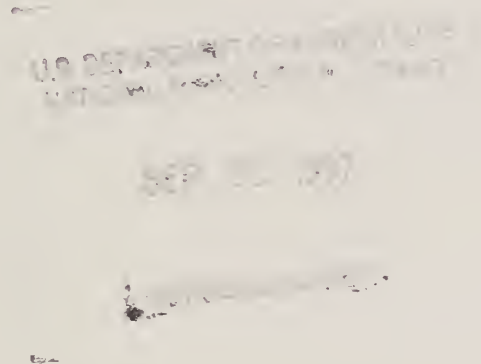
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# Definition of the Foodservice Industry and Methodology for Estimating Selected Statistics

Michael G. Van Dress



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# ABSTRACT

Eating out no longer is reserved for special occasions. Expenditures for eating out now account for 41 cents of every food dollar, up from 27 cents in 1960. Growth has been phenomenal. With growth, changes were inevitable--changes in the structure and organization of the industry, in food purchasing and ordering practices, in the mix of foods served, and in food marketing and distribution systems. Such changes affect food producers, manufacturers, middlemen, and consumers. This report provides a framework for measuring changes occurring in the foodservice industry. It defines the industry and its many segments and describes a methodology for estimating the retail and purchase values of meals and snacks and the quantity of food moving through the industry on a market segment-by-segment basis.

Keywords: Foodservice industry definition, foodservice industry methodology, foodservice industry structure, eating places, eating out.



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# Definition of the Foodservice Industry and Methodology for Estimating Selected Statistics

Michael G. Van Dress \*

## INTRODUCTION

Food service accounted for 41 cents of every food dollar in 1983, up from 27 cents in 1960.<sup>1/</sup> Farmers and food marketers are questioning the implications of growth, structural changes, and food use in the market for food away from home. The objectives of this report are to define the parameters of the foodservice industry, to provide a methodology for developing a foodservice data base, and to specify procedures for collecting and estimating annual food use, food sales, and food costs for individual segments of the food-service industry.

Eating out is not reserved for special occasions as it was by many Americans prior to World War II. Today, eating at restaurants, fast food places and cafeterias, or purchasing ready-to-eat foods away from home for immediate consumption at work, in cars, or at home is ingrained in the food purchasing and eating habits of many consumers.

After World War II, and especially during the late fifties and early sixties, children began to eat out at an early age at day-care centers, school cafeterias, and fast-food places. Throughout their learning years, young children and teenagers have been exposed to the foodservice experience while shopping with mom and dad, while on vacation, and while at college and work. Many of them have experienced food service at a hospital or other institution. By the time these young people attained adulthood, food service had become a way of life.

Growth in food service has been phenomenal. At-home food expenditures (adjusted for inflation) increased at a compound annual rate of 1.3 percent between 1954 and 1983. Away-from-home expenditures increased twice as fast, at a rate of 2.7 percent per year. During the same period, disposable personal income per capita gained 2.2 percent annually.

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<sup>1/</sup> Manchester, Alden C., and Richard A. King. U.S. Food Expenditures, 1954-78, Agr. Econ. Rep. 431, U.S. Dept. Agr., Econ. Stat. Coop. Serv., Wash., D.C. August 1979, as updated.

Substantial changes in the structure and organization of the foodservice industry, including proliferation of fast-food outlets, growth of franchise firms and large chains, and the rapid decline of restaurant diners, considerably altered the nature of the foodservice delivery system and the mix of foods consumed away from home.

The definitions and methodology described in this report were developed to provide researchers with an efficient alternative to conducting primary research to identify annual trends, measure change, and assess the implications of change in the foodservice industry structure, eating out sales, and use of food by producers, manufacturers, and participants in the foodservice delivery system.

A caveat: Do not confuse sales and expenditures data. As noted, procedures for estimating meal and snack sales appear in this report. Information on meal and snack expenditures, as distinguished from meal and snack sales, is also available from the U.S. Department of Agriculture's Economic Research Service (ERS).<sup>2/</sup> The two data bases differ in purpose and construction. Expenditures data measure sales of food for off-premises use and meals and snacks at the point of final sale to consumers, businesses, governments, and institutions. They also include the value of home-produced and donated foods, as well as sales taxes and tips.

Expenditures for most foodservice segments are valued at retail cost plus tips and taxes but in some instances--for example, troop feeding in the military, patient feeding in hospitals, and resident feeding in nursing and care facilities--are valued at wholesale cost without retail markup. In these special cases, where the consumer is not billed directly for the cost of meals and snacks, the expenditures data base makes no adjustment to cover foodservice handling and preparation costs that would be included in an estimate of retail value. In contrast, all sales data in this report represent actual retail sales or estimated retail value and do not include tips and taxes. The sales data base also provides estimates of food use and food costs and greater foodservice industry segmentation than the expenditure series.

#### PROCEDURE

Data were obtained from secondary sources in published and unpublished form or, in some instances, were estimated. For a complete discussion covering the procedure used for developing the statistics for an individual foodservice segment, refer to the section of the report under the respective segment heading.

#### ABBREVIATIONS USED

ACI --Average Census of Inpatient Days  
AHA --American Hospital Association  
AOA --Administration on Aging  
ARTS --Annual Retail Trade Survey  
ASSO --Associations  
ASSS --Annual Selected Services Survey

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<sup>2/</sup> Ibid.

AT --Air Transportation  
 BH --Boarding Houses  
 CAFE --Cafeterias  
 CBP --County Business Patterns  
 CDC --Child Day-care Facilities  
 CF --Contract Feeders  
 CI --Correctional Institutions  
 CPI --Consumer Price Index (food away from home)  
 CRT --Census of Retail Trade  
 CSI --Census of Service Industries  
 DES --Digest of Education Statistics  
 DPSC --Defense Personnel Support Center  
 EFP --Elderly Feeding Programs  
 ERS --Economic Research Service  
 ESS --Elementary and Secondary Schools  
 FF --Fast-food Places  
 FNS --Food and Nutrition Service  
 FSI --Foodservice Industry Survey  
 FUE --Full-time Undergraduate Enrollment  
 HCFA --Health Care Finance Administration  
 HE --Higher Education  
 HOSP --Hospitals  
 KOB --Kind of Business  
 LP --Lodging Places  
 MS --Military Services  
 M&S --Meals and Snacks  
 MLS --Merchandise Line Sales  
 NCES --National Center for Education Statistics  
 NRC --Nursing and Residential Care Establishments  
 NS --Nonaccredited Schools  
 PCE --Personal Consumption Expenditures  
 POB --Plants and Office Buildings  
 PPI --Producer Price Index (finished consumer foods)  
 R&E --Recreation and Entertainment  
 RH --Retail Hosts  
 RL --Restaurants and Lunchrooms  
 RLC --Restaurants, Lunchrooms, and Cafeterias  
 RO --Religious Organizations  
 RT --Rail Transportation  
 RTACE--Recent Trends in Airline Cost Elements  
 SC --Social Caterers  
 SDP --Separate Drinking Places  
 SEP --Separate Eating Places  
 SIC --Standard Industrial Classification  
 USDA --U.S. Department of Agriculture  
 VM --Vending Machine Firms  
 WT --Water Transportation

#### THE FOODSERVICE INDUSTRY

Food service is the serving of prepared meals and snacks intended for immediate consumption. The industry consists of individual market segments, each with specialized requirements for food, equipment, and supplies. Each segment uses unique methods of purchasing, storing, preparing, and serving (dispensing) meals and snacks according to the needs of their customers.

Food service may be the primary function of an establishment, or may be provided as an adjunct to the primary purpose of an establishment as in a bowling alley snack bar, a department store coffee shop, a university cafeteria, or patient feeding in a hospital. The food may be consumed on the premises or eaten elsewhere, such as at work or home.

The foodservice industry may be divided into two groups, commercial and non-commercial. Commercial foodservice establishments exist primarily for profit. Food service in the commercial sector may be provided as a subordinate activity of a business, such as a hotel restaurant and a drug store luncheon counter; or as the major business, such as a separate eating place in which the sale of prepared meals and snacks is the activity from which most revenue is derived.

The primary purpose of noncommercial foodservice operations in such establishments as nursing homes, child day-care centers, factories, and the military is viewed as rendering a feeding service rather than making a profit, although the foodservice operation in some noncommercial establishments may generate a profit. Some operations that are classified in the noncommercial group, for example, military exchanges and vending firms, could alternatively be classified in the commercial sector depending upon the data user's needs.

Under the report heading for each segment of the foodservice industry is a definition of the segment together with a procedure for data estimation. Classification of the industry is as follows:

#### Segments of the Foodservice Industry

##### Commercial feeding

- Separate eating places
  - Restaurants, lunchrooms
  - Fast-food outlets
  - Cafeterias
- Lodging places
- Retail hosts
- Recreation, entertainment
- Separate drinking places

##### Noncommercial feeding

- Education
  - Elementary, secondary schools
  - Colleges, universities
  - Other schools
- Plants, office buildings
- Hospitals
- Care facilities
- Vending
- Military services
  - Troop feeding
  - Clubs, exchanges
- Transportation
- Associations
- Correctional institutions
- Child day-care facilities
- Other

## Separate Eating Places

Separate eating places are establishments that do not operate as subordinate facilities of different and separately identifiable kinds of businesses (KOB), and whose primary function is the sale of prepared meals and snacks for a profit.

This group includes establishments that are classified under Standard Industrial Classification (SIC) 5812. Excluded are contract feeders that are classified with plants and office buildings, or other businesses in which they operate.

Four data sets are used for separate eating places (SEP) to achieve study objectives. The four sets and their uses are:

1. The Census of Retail Trade (CRT), conducted at 5-year intervals, is the benchmark for sales of meals and snacks (M&S). The U.S. summary from the 1982 census is planned for publication in 1984. A subset of the Census of Retail Trade, Merchandise Line Sales (MLS), provides meal and snack sales estimates for establishments with payroll. The ratio of meal and snack sales to total sales of eating places with payroll is used to estimate meal and snack sales for all separate eating places, including those without payroll.
2. Sales data from the Annual Retail Trade Survey (ARTS) are used to move annual estimates of meal and snack sales and food use between benchmark periods.
3. The Consumer Price Index (CPI) for food away from home is used to calculate real sales of meals and snacks.
4. The Foodservice Industry Survey (FSI), conducted in 1979 by the International Foodservice Manufacturers Association, is the benchmark for food use. The Foodservice Industry Survey is used to compute food costs. The cost-to-sales ratios are: 0.388 for separate eating places, 0.398 for restaurants and lunchrooms, 0.377 for fast-food places, and 0.380 for cafeterias.

Differences in establishment classification used in the Census of Retail Trade, Merchandise Line Sales, Foodservice Industry Survey, and Annual Retail Trade Survey must be resolved. For example, the Census of Retail Trade delineates establishments by type of food service. The Merchandise Line Sales classifies social caterers (SC), ice cream stands, and contract feeders (CF) together as "other eating places." In the Foodservice Industry Survey, contract feeders are included with the kinds of businesses in which they operate. The Annual Retail Trade Survey combines contract feeders and cafeterias (CAFE) with restaurants and lunchrooms (RL) to form the category restaurants, lunchrooms, cafeterias (RLC). The Annual Retail Trade Survey also classifies ice cream stands with refreshment places and includes data for social caterers under the total for eating places, but not separately. Differences in classification are resolved as follows:

1. Sales and food use estimates for contract feeders are included with the kinds of businesses in which they operate and not with separate eating

places, as classified in the Census of Retail Trade. This adjustment is necessitated by conventions used in the Foodservice Industry Survey.

2. Since sales and food use at social caterers are included in the separate eating places total and not shown separately, the separate eating places total will always be more than the sum of the parts. Social caterers are treated in this manner because they do not have the characteristics of any delineated class, and they frequently do not serve meals and snacks at a fixed location.
3. Sales and food use estimates for ice cream stands are included with refreshment places because many establishments of this type have expanded their menus to include hot dogs and other food offerings. When combined, ice cream stands and refreshment places are hereafter referred to as fast-food places (FF).
4. Sales estimates for contract feeders, social caterers, cafeterias, and ice cream stands, not shown separately in the Annual Retail Trade Survey and Merchandise Line Sales, are apportioned based on the percentage of total sales represented by each class in the Census of Retail Trade. Subsequent to the above adjustments, classification of separate eating places and selected 1977 statistics from the Census of Retail Trade and Merchandise Line Sales, sales shown in millions of dollars, are:

<u>Classification</u>	<u>Total sales</u>	<u>M&amp;S sales</u>
SEP	52,607	47,426
RL	29,086	24,720
FF	20,919	20,334
CAFE	1,881	1,813

Sales data published in the Annual Retail Trade Survey must be adjusted to remove sales of nonmeals and snacks, to reconcile differences in classification, and to deduct sales of contract feeders. Sales in the Annual Retail Trade Survey are for all establishments. The adjusted annual figure, expressed as a percentage change from 1977, is used to move separate eating places sales from the 1977 Census of Retail Trade and food use from the 1979 Foodservice Industry Survey. The working procedure adopted is as follows:

Table 1--SEP sales based on the ARTS, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million dollars</u>						
SEP	93,296	86,851	79,478	72,735	63,454	55,581
RLC	56,051	53,316	48,933	46,074	39,818	33,963
FF	36,070	32,453	29,553	25,853	22,881	20,934

Table 2--Estimated sales at CAFE and CF, as published in the ARTS (5.5 percent and 8.8 percent of total RLC and CF sales, respectively), based on the CRT and sales of SC, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million dollars</u>						
CAFE	3,106	2,954	2,712	2,553	2,206	1,882
CF	4,911	4,672	4,288	4,037	3,489	2,976
SC	1,175	1,082	992	808	755	684

Table 3--Estimated SEP sales of M&S, classification adjusted in accordance with FSI (CF excluded; SC included in SEP total), based on the ARTS, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million dollars</u>						
SEP	79,788	74,062	67,747	61,773	53,953	47,428
RL	40,823	38,831	35,639	33,557	29,000	24,736
FF	35,061	31,546	28,727	25,130	22,241	20,349
CAFE	2,995	2,849	2,614	2,462	2,127	1,815

Table 4--Percentage change from 1977 in SEP sales of M&S, expressed as a factor, based on the ARTS, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Percent</u>						
SEP	1.682	1.562	1.428	1.302	1.138	1.000
RL	1.650	1.570	1.441	1.357	1.172	1.000
FF	1.723	1.550	1.412	1.235	1.093	1.000
CAFE	1.650	1.570	1.441	1.357	1.172	1.000

Table 5--Estimated SEP sales of M&S, based on CRT and MLS, and moved by estimated changes in the ARTS, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million dollars</u>						
SEP	79,784	74,059	67,744	61,770	53,950	47,426
RL	40,796	38,805	35,615	33,534	28,981	24,720
FF	35,037	31,523	28,706	25,112	22,226	20,334
CAFE	2,993	2,847	2,613	2,460	2,126	1,813

Table 6--CPI for food away from home (1967=100), 1977-82.

<u>Index</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
CPI	306.5	291.0	267.0	242.9	218.4	200.3

Table 7--Percentage change from 1979 in SEP real sales of M&S, expressed as a factor, with CRT as the base, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	<u>Percent</u>					
SEP	1.024	1.001	0.998	1.000	0.971	0.931
RL	.964	.966	.966	1.000	.961	.894
FF	1.106	1.048	1.040	1.000	.984	.982
CAFE	.964	.966	.966	1.000	.961	.894

Table 8--Estimated SEP use of food, based on the FSI and moved by estimated changes in real sales, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	<u>Million pounds</u>					
SEP	29,694	29,031	28,943	29,009	28,179	27,009
RL	15,374	15,402	15,407	15,946	15,327	14,254
FF	11,909	11,286	11,201	10,771	10,602	10,577
CAFE	2,197	2,101	2,101	2,175	2,091	1,944

Table 9--Estimated SEP costs of M&S, based on the CRT and FSI, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	<u>Million dollars</u>					
SEP	30,956	28,735	26,285	23,967	20,933	18,401
RL	16,237	15,445	14,175	13,347	11,534	9,838
FF	13,209	11,884	10,822	9,467	8,379	7,666
CAFE	1,137	1,082	993	935	808	689

#### Lodging Places

Lodging places (LP) are commercial establishments that provide both lodging and food service to the general public. Lodging places include hotels, motels, and tourist courts that are classified under SIC 701. Resort hotels and hotels operated by membership organizations and open to the general public are also classified as lodging places. Those that are not open to the public are in SIC 7041 (included with associations). Rooming and boarding houses are in SIC 7021 (included under other). Sporting and recreational camps are in SIC 7032 (included with recreation and entertainment). Private residences and apartment hotels, SIC 6513, are excluded.

Four data sets are used to develop estimates for lodging places. Two of the four sets, the Consumer Price Index (food away from home) and the Foodservice Industry Survey, are described under Separate Eating Places. The two remaining sets and their uses are:

1. The Census of Service Industries (CSI), conducted at 5-year intervals, is used as the benchmark for receipts at lodging places. The U.S. summary from the 1982 census is planned for publication in 1984. The ratio of

meal and snack sales to total receipts, computed for SIC 701 establishments with payroll, is used to estimate meal and snack receipts for all lodging places.

2. The Annual Selected Services Survey (ASSS) conducted by the Bureau of the Census provides estimates of receipts for all lodging places.

Lodging places receipts from the Annual Selected Services Survey must be adjusted to remove receipts of nonmeals and snacks. The adjusted annual figure, expressed as a factor, is used to move base period statistics on sales and food use from the Census of Service Industries and the Foodservice Industry Survey. A food cost-to-sales ratio of 0.403 also is derived from the Foodservice Industry Survey. The working procedure is as follows:

Table 10--LP receipts (in millions of dollars) from the CSI, 1977.

<u>Total</u>	<u>M&amp;S</u>
17,719	3,613

Table 11--LP receipts (in millions of dollars) from the ASSS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
28,851	26,719	23,711	22,295	19,503	16,464

Table 12--Estimated LP receipts of M&S (in millions of dollars), based on the ASSS and the CSI M&S ratio, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
5,883	5,448	4,835	4,546	3,977	3,357

Table 13--Percentage change from 1977 in LP sales of M&S, expressed as a factor, based on the ASSS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.752	1.623	1.440	1.354	1.185	1.000

Table 14--Estimated LP sales of M&S (in millions of dollars), based on the CSI and moved by changes in the ASSS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
6,331	5,863	5,203	4,893	4,280	3,613

Table 15--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 16--Percentage change from 1979 in LP real sales of M&S, expressed as a factor, with CSI as the base, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.026	1.000	0.968	1.000	0.973	0.896

Table 17--Estimated LP use of food (in millions of pounds), based on the FSI and moved by estimated changes in real sales, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,272	2,216	2,143	2,215	2,155	1,984

Table 18--Estimated LP costs of M&S (in millions of dollars), based on the CSI and FSI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,551	2,363	2,097	1,972	1,725	1,456

#### Retail Hosts

Retail hosts (RH) are foodservice operations that operate within retail establishments, such as department stores; limited-price variety stores; delicatessens; candy, nut, or confectionery stores; retail bakery stores; drug stores; gasoline service stations; and miscellaneous retailers. This group includes establishments in SIC 53 through SIC 57 and SIC 59. Eating and drinking places (SIC 58) and vending machine firms (VM) SIC 5962, are shown separately and not included under retail hosts.

The same four data sets used for separate eating places also are used for retail hosts. For a discussion of these sets, refer to the section of the report on separate eating places.

Sales data from the Annual Retail Trade Survey must be adjusted to remove sales of eating and drinking places, vending firms, and nonmeals and snacks. The adjusted annual figure, expressed as a factor, is used to move retail hosts annual sales and food use estimates between benchmark periods. A food cost-to-sales ratio of 0.392 is used to compute food costs. The working procedure is as follows:

Table 19--RH sales from the CRT (developed by subtracting sales of SEP, separate drinking places (SDP), and vending machine firms from total retail trade sales), 1977.

<u>KOB</u>	<u>Total sales</u>	<u>M&amp;S</u>
<u>Million dollars</u>		
Retail trade	699,635	54,735
SEP, SDP	(61,307)	(50,109)
VM	(3,700)	(1,935)
RH	634,628	2,691

Table 20--RH sales (in millions of dollars) from the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
964,048	939,601	865,397	812,342	730,686	657,987

Table 21--Estimated RH sales of M&S (in millions of dollars), based on the ARTS and the CRT M&S ratio, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
4,088	3,984	3,670	3,445	3,098	2,790

Table 22--Percentage change from 1977 in RH sales of M&S, expressed as a factor, based on the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.465	1.428	1.315	1.235	1.110	1.000

Table 23--Estimated RH sales of M&S (in millions of dollars), based on CRT and moved by estimated changes in the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
3,943	3,843	3,539	3,322	2,988	2,691

Table 24--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 25--Percentage change from 1979 in RH real sales of M&S, expressed as a factor, with CRT as the base, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.940	0.965	0.969	1.000	1.000	0.982

Table 26--Estimated RH use of food (in millions of pounds), based on the FSI and moved by estimated changes in real sales, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,868	1,917	1,925	1,986	1,987	1,951

Table 27--Estimated RH costs of M&S (in millions of dollars), based on the CRT and FSI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,546	1,506	1,387	1,302	1,171	1,055

## Recreation and Entertainment

Recreation and entertainment (R&E) are foodservice operations in sporting and recreational camps; theaters; bowling, billiard, or pool halls; commercial sports establishments (racetracks and stadiums); membership golf or country clubs; public golf courses; and miscellaneous commercial amusement and recreational establishments (tennis clubs, athletic clubs, and amusement parks). Such establishments comprise SIC 7032, 7832, 7833, and 79.

The same four data sets used for lodging places also are used for recreation and entertainment. For a discussion of these sets, refer to sections of the report on lodging places and separate eating places. Recreation and entertainment also uses information on the U.S. Department of Agriculture (USDA) summer foodservice program obtained from the Food and Nutrition Service (FNS).

Classification of recreation and entertainment differs among the Foodservice Industry Survey, the Census of Service Industries, and the Annual Selected Services Survey. Classifications provided in greater detail in both the Foodservice Industry Survey and the Census of Service Industries are combined to agree with the broader classification used in the Annual Selected Services Survey. The Foodservice Industry Survey was adjusted to include data on "four-wall" theaters. Meal and snack and alcoholic beverage receipts for amusement and recreational services (excluding motion pictures and sporting and recreational camps, not delineated by the Census of Service Industries) are estimated based on the ratio of meal and snack sales to combined sales of meals and snacks and alcoholic beverages at eating and drinking places (SIC 58).

Recreation and entertainment receipts from the Annual Selected Services Survey are adjusted to remove receipts of nonmeals and snacks. A sample change in 1982 necessitated an upward adjustment of receipts for prior years by a factor of 1.181. These adjustments to the Annual Selected Services Survey data set enabled the movement of recreation and entertainment receipts and food use estimates from base period statistics. Federal expenditures for food moving through the summer foodservice programs are added subsequent to calculating meals and snacks for the other recreational and entertainment categories because children participating in the program are not charged for meals. A ratio of 0.5 is used to compute the retail value of meals for the summer program.

Food use for this program is estimated at 335.5 million pounds, based on the food cost and quantity relationship found in elementary and secondary schools. A cost-to-sales ratio of 0.397 is used to compute food costs. The working procedure is as follows:

Table 28--R&amp;E receipts from the CSI, 1977.

<u>Kind of business</u>	<u>Total sales</u>	<u>M&amp;S</u>
<u>Million dollars</u>		
Total	16,008	1,572
Sporting, recreational camps (SIC 7032)	277	57
Theaters, 4-walls (SIC 7832)	2,165	306
Theaters, drive-in (SIC 7833)	440	93
Bowling, billiard, pool (SIC 793)	1,768	416
Amusement & recreation, other (SIC 79-793)	11,358	701

Table 29--R&amp;E receipts from the ASSS, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million dollars</u>						
Total	30,288	28,373	26,000	23,394	20,616	20,433
SIC 7032	1,597	1,371	1,552	1,324	790	945
SIC 7832	2,858	2,705	2,832	2,538	2,420	2,378
SIC 7833	868	822	861	772	735	723
SIC 793	2,183	2,101	2,031	1,696	1,555	1,528
SIC 79-793	22,782	21,374	18,724	17,064	15,116	14,859

Table 30--Estimated R&amp;E receipts of M&amp;S based on the ASSS and the CSI M&amp;S ratio, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million dollars</u>						
Total	2,834	2,650	2,533	2,245	1,958	1,959
SIC 7032	326	280	317	271	161	193
SIC 7832	404	382	400	359	342	336
SIC 7833	183	174	182	163	155	153
SIC 793	513	494	477	399	365	359
SIC 79-793	1,407	1,320	1,156	1,054	934	918

Table 31--Percentage change from 1977 in R&amp;E sales of M&amp;S, expressed as a factor, based on the ASSS, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Percent</u>						
Total	1.447	1.353	1.293	1.146	0.999	1.000
SIC 7032	1.690	1.451	1.642	1.401	.836	1.000
SIC 7832	1.202	1.138	1.191	1.067	1.018	1.000
SIC 7833	1.201	1.137	1.191	1.068	1.017	1.000
SIC 793	1.429	1.375	1.329	1.110	1.018	1.000
SIC 79-793	1.533	1.438	1.260	1.148	1.017	1.000

Table 32--Estimated R&E sales of M&S with CSI as the base and moved by estimated changes in the ASSS, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	<u>Million dollars</u>					
Total	2,244	2,116	2,004	1,772	1,590	1,572
SIC 7032	96	82	93	79	47	57
SIC 7832	368	348	364	327	311	306
SIC 7833	112	106	111	99	95	93
SIC 793	594	571	552	461	423	416
SIC 79- 793	1,075	1,009	884	806	714	701

Table 33--Federal expenditures and estimated sales of M&S moving through USDA summer foodservice programs (in millions of dollars), 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
Fed. exp.	87.2	104.6	113.4	112.5	106.7	126.3
Sales	174.4	209.2	226.8	225.0	213.4	252.6

Table 34--Estimated total R&E sales of M&S (in millions of dollars), based on the CSI and FNS, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	2,418	2,325	2,231	1,997	1,803	1,825

Table 35--CPI for food away from home (1967=100), 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	306.5	291.0	267.0	242.9	218.4	200.3

Table 36--Percentage change from 1979 in total R&E real sales of M&S, expressed as a factor, based on the CSI and FNS, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	0.960	0.972	1.016	1.000	1.004	1.108

Table 37--Estimated R&E use of food (in millions of pounds), based on the FSI and moved by estimated changes in the CSI and real sales, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	2,934	2,972	3,107	3,057	3,070	3,388

Table 38--Estimated total R&E costs of M&S (in millions of dollars), based on the CSI, FSI, and FNS, 1977-82.

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	978	945	909	816	738	751

### Separate Drinking Places

Separate drinking places (SDP) are establishments with foodservice that do not operate as subordinate facilities of different and separately identifiable kinds of businesses; their primary function is the sale of alcoholic beverages, primarily for consumption on the premises. Included are establishments in SIC 5813.

The same four data sets used for separate eating places also are used for separate drinking places. For a discussion of these sets, refer to separate eating places.

Sales data from the Annual Retail Trade Survey must be adjusted to remove sales of nonmeals and snacks at separate drinking places. The adjusted annual figure, expressed as a factor, is used to move separate drinking places sales and food use estimates from the Census of Retail Trade and the Foodservice Industry Survey. A cost-to-sales ratio of 0.357 from the Foodservice Industry Survey was used to compute food costs. The working procedure is as follows:

Table 39--SDP sales (in millions of dollars) from the 1977 CRT.

<u>Total sales</u>	<u>M&amp;S sales</u>
7,695	979

Table 40--SDP sales (in millions of dollars) from the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
11,419	11,421	10,687	9,416	8,386	7,695

Table 41--Estimated SDP sales of M&S (in millions of dollars), based on the ARTS and the CRT M&S ratio, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,453	1,453	1,360	1,198	1,064	979

Table 42--Percentage change from 1977 in SDP sales of M&S, expressed as a factor, based on the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.484	1.484	1.389	1.224	1.087	1.000

Table 43--Estimated SDP sales of M&S (in millions of dollars), based on the CRT and moved by estimated changes in the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,453	1,453	1,360	1,198	1,064	979

Table 44--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 45--Percentage change from 1979 in SDP real sales of M&S, expressed as a factor, with CRT as the base, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.961	1.012	1.033	1.000	0.988	0.991

Table 46--Estimated SDP use of food (in millions of pounds), based on the FSI and moved by estimated changes in real sales, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,475	1,554	1,585	1,535	1,516	1,521

Table 47--Estimated SDP cost of M&S (in millions of dollars), based on CRT and FSI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
519	519	485	428	380	350

### Education

Educational facilities with food service include public and private elementary and secondary schools, colleges and universities, and nonaccredited schools that are classified in SIC 821, 822, 8243, 8244, and 829.

#### Schools, Grades K-12

Three data sets are used for elementary and secondary schools (ESS). They are:

1. The producer price index (PPI) for finished consumer foods represents prices of commodities that are ready for resale without further processing.
2. Benchmarks for food quantity and cost values are from the report, Food Service in the Nation's Schools, March 1983.
3. Student participation in school foodservice is derived from published and unpublished data obtained from the USDA's Food and Nutrition Service.

Benchmark estimates of food quantity and cost are moved by changes in student participation and food prices, where applicable. For this market a food cost-to-sales ratio of 0.5 was used to calculate the retail value of meals and snacks. The working procedure is as follows:

Table 48--Food quantity and cost estimates (in millions of pounds or dollars), based on the school survey, 1977.

<u>Quantity</u>	<u>Cost</u>
8,778	2,943

Table 49--PPI for finished consumer foods (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
259.3	253.6	239.5	226.2	207.2	189.9

Table 50--Percentage change from 1977 in the PPI, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.365	1.335	1.261	1.191	1.091	1.000

Table 51--Number of meals served at ESS (in millions), based on data from FNS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
4,327	4,863	5,007	4,923	4,773	4,720

Table 52--Percentage change from 1977 in number of meals served, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.917	1.030	1.061	1.043	1.011	1.000

Table 53--Estimated ESS costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
3,684	4,049	3,937	3,656	3,247	2,943

Table 54--Estimated ESS food use (in millions of pounds), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
8,047	9,044	9,312	9,156	8,877	8,778

Table 55--Estimated ESS sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
7,368	8,099	7,875	7,313	6,494	5,886

## Higher Education

Three data sets are used for higher education (HE). The Consumer Price Index and the Foodservice Industry Survey are described under separate eating places. Board costs and full-time undergraduate enrollment (FUE) in institutions of higher learning (fall of year), excluding unclassified undergraduates, is available in the Digest of Education Statistics (DES) published by the National Center for Education Statistics (NCES).

The cost per meal per day is computed by dividing the board cost by the number of meals served in 230 days (the total number of days in a school year, less a Christmas and spring break). The participation rate for students is estimated at 50 percent. The cost-to-sales ratio and pounds of food per dollar of sales at colleges is from the Foodservice Industry Survey. The working procedure is as follows:

Table 56--Cost-to-sales ratio and pounds of food received per dollar of sales at colleges, based on the 1979 FSI.

<u>Ratio</u>	<u>Pounds per dollar</u>
0.431	1.37

Table 57--FUE (in thousands of students) for HE from the DES and NCES, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
6,317	6,292	6,201	5,925	5,813	5,944

Table 58--Per meal board charge, based on the DES, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.60	1.44	1.32	1.22	1.15	1.10

Table 59--Estimated HE sales of M&S (in millions of dollars), based on changes in the FUE and per meal board charge, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
3,487	3,126	2,824	2,494	2,306	2,256

Table 60--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 61--Percentage change from 1979 in HE real sales of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.108	1.046	1.030	1.000	1.029	1.097

Table 62--Estimated HE food use (in millions of pounds), based on the FSI and DES and moved by changes in real sales, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
3,786	3,575	3,520	3,417	3,514	3,748

Table 63--Estimated HE costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,503	1,347	1,217	1,075	994	972

### Nonaccredited Schools

Three data sets are used for nonaccredited schools (NS). The Consumer Price Index and the Foodservice Industry Survey are described under separate eating places. The remaining set, the Digest of Education Statistics and miscellaneous unpublished data, is available from the National Center for Education Statistics.

The Digest of Education Statistics provides enrollment statistics for non-accredited schools. Such institutions include vocational/technical, technical institute, business/office, and trade schools. Board costs for the university system also are provided by the Digest of Education Statistics. The total number of days (7-day basis) in a school year, less a Christmas and spring break are estimated at 230, and the number of school days at 166. The participation rate for students is estimated at 50 percent. The cost-to-sales ratio for nonaccredited schools is assumed to be the same as that for colleges. Commodity use also is assumed to be in the same proportion and mix as that for colleges. The working procedure is as follows:

Table 64--Cost-to-sales ratio and pounds of food received per dollar of sales at colleges, based on the 1979 FSI.

<u>Ratio</u>	<u>Pounds per dollar</u>
0.431	1.37

Table 65--Enrollment in selected noncollegiate, post-secondary schools (in thousands of students), based on DES and ERS estimates, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,228	1,271	1,223	1,168	1,113	1,098

Table 66--Per meal board charge, based on DES, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.60	1.44	1.32	1.22	1.15	1.10

Table 67--Estimated NS sales of M&S (in millions of dollars), based on changes in the enrollment and per meal board charge, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
163	152	134	118	106	100

Table 68--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 69--Percentage change from 1979 in NS real sales of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.093	1.072	1.031	1.000	0.999	1.028

Table 70--Estimated NS food use (in millions of pounds), based on the FSI and DES and moved by changes in real sales, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
177	174	167	162	162	167

Table 71--Estimated NS costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
70	65	58	51	46	43

#### Plants and Office Buildings

Plants and office buildings (POB) are establishments whose food-service facilities provide a manual rather than a vended food service. These establishments may be company-managed or operated under contract by firms classified under SIC 5812 (part) and 5962.

Three data sets are used for plants and office buildings. The Consumer Price Index and the Foodservice Industry Survey are described under separate eating places. The remaining set, civilian employment, is published by the USDA's Economic Research Service (ERS) in Working Data for Demand Analysis.

Food costs and cost-to-sales ratios, used to estimate sales at plants and office buildings, are from the Foodservice Industry Survey. Cost data are moved by changes in the Consumer Price Index and employment. A factor of 3.5 pounds of food per real dollar of food costs was derived from the Foodservice Industry Survey, as was the weighted cost-to-sales ratio of 0.401. Food costs for 1977 are estimated at \$1,434 million. The working procedure is as follows:

Table 72--Percentage change in civilian employment from 1977, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.082	1.091	1.079	1.074	1.044	1.000

Table 73--Percentage change in the CPI from 1977, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.530	1.453	1.333	1.213	1.090	1.000

Table 74--Estimated POB costs of M&S (in million of dollars), based on the FSI and moved by changes from 1977 in the CPI and civilian employment, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,373	2,273	2,063	1,868	1,632	1,434

Table 75--Estimated POB food use (in millions of pounds), based on the FSI and moved by changes in civilian employment, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,711	2,734	2,705	2,691	2,616	2,506

Table 76--Estimated POB sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
5,919	5,669	5,145	4,658	4,070	3,576

### Hospitals

Hospitals with food service include public and private hospitals in SIC 806.

Three data sets are used for hospitals (HOSP). The Consumer Price Index and the Foodservice Industry Survey are described under separate eating places. The remaining set, the Average Census of Inpatient Days (ACI), is available from the American Hospital Association (AHA).

The Average Census of Inpatient Days is used as a proxy to move annual estimates of food use and real food costs and sales between benchmark periods. The Consumer Price Index is used to adjust real food sales to current food sales. And the cost-to-sales ratio of 0.382 from the Foodservice Industry Survey is used to calculate meal and snack costs. The working procedure is as follows:

Table 77--Food use and food sales in 1979 at HOSP (in millions of pounds or dollars), based on the FSI.

<u>Food use</u>	<u>Food sales</u>
3,188	4,403

Table 78--ACI (in thousands of inpatient days) for HOSP from the AHA, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,053	1,061	1,060	1,043	1,042	1,066

Table 79--Percentage change from 1979 in ACI for HOSP, expressed as a factor, with AHA as the base, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.010	1.017	1.016	1.000	0.999	1.022

Table 80--Percentage change in CPI from 1979, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.262	1.198	1.099	1.000	0.899	0.825

Table 81--Estimated HOSP sales of M&S (in millions of dollars), with FSI as the base and moved by changes in the ACI and CPI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
5,609	5,366	4,919	4,403	3,955	3,711

Table 82--Estimated HOSP food use (in millions of pounds), based on the FSI and moved by changes in ACI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
3,219	3,243	3,240	3,188	3,185	3,258

Table 83--Estimated HOSP costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,143	2,050	1,879	1,682	1,511	1,418

### Care Facilities

Care facilities with food service include skilled nursing homes that provide continuous health care as their primary function; nursing and personal-care facilities that provide some nursing services, but not on a continuing basis; and residential-care facilities that provide personal care where medical care is not a major element. Nursing and residential care establishments (NRC) are classified in SIC 805 and 836.

Four data sets are used for nursing and residential care establishments. The Census of Service Industries, the PPI, and the Foodservice Industry Survey

are described under separate eating places and elementary and secondary schools. The remaining set, estimated expenditures for all goods and services at nursing homes, is available from the Health Care Finance Administration (HCFA). A cost index to compute real expenditures and data on food costs and number of inpatient days is also available.

Changes in real expenditures at nursing homes are used as proxies to determine changes in nursing and residential care establishments. The Foodservice Industry Survey and Consumer Price Index are used to calculate food use and current food costs. The cost of food per resident day and the number of inpatient days in nursing homes in 1977 was \$2.14 and 478.57 million. A food cost-to-sales ratio of 0.5 is used to calculate the retail value. A factor of 1.268, based on relationships in the Census of service Industries, is used to expand nursing home data to include residential care facilities. And an estimate of 2.955 pounds of food per dollar of real food cost was derived from the Foodservice Industry Survey. The working procedure is as follows:

Table 84--Nursing home expenditures (in billions of dollars), based on the HCFA, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
27.3	24.2	20.6	17.6	15.2	13.2

Table 85--Real nursing home expenditures (in billions of dollars) based on the cost index for all items (1977=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
17.7	16.9	15.8	14.8	14.0	13.2

Table 86--Percentage change from 1977 in real total expenditures at nursing homes, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.338	1.277	1.196	1.124	1.058	1.000

Table 87--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 88--Estimated NRC costs of M&S (in millions of dollars), based on data from the HCFA, as adjusted by changes from 1977 in real nursing home expenditures and the PPI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,372	2,214	1,959	1,739	1,500	1,299

Table 89--Estimated NRC real costs of M&S (in millions of dollars), based on the PPI (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
915	873	818	769	724	684

Table 90--Estimated NRC food use (in millions of pounds), based on the FSI and NRC real costs of M&S, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,703	2,580	2,417	2,272	2,139	2,021

Table 91--Estimated NRC sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
4,744	4,428	3,917	3,478	2,999	2,597

### Vending

Vended food service is operated by firms engaged in the retail sale of meals and snacks through vending machines. Included in this group are establishments in SIC 5962 and 5812 (part) that provide vended rather than manual food service. Such service may be provided at plants, office buildings, and other locations. Sales of meals and snacks through vending machines that are not operated by firms engaged in vending at retail are excluded.

The same four data sets used for separate eating places also are used for vending machine firms. For a discussion of these sets, the Census of Retail Trade, the Annual Retail Trade Survey, the Foodservice Industry Survey, and the Consumer Price Index, refer to the section of the report headed separate eating places.

Sales of meals and snacks by vending operators (SIC 5962) and contract feeders (SIC 5812 pt) through vending machines amounted to \$2,507.9 million, according to the 1977 Census of Retail Trade. The food cost-to-sales ratio and pounds of food per dollar of real sales, based on the Foodservice Industry Survey, are estimated at 0.389 and 1.4, respectively. Annual sales of SIC 596, less mail order houses (SIC 5961 part), from the Annual Retail Trades Survey, are used to move base period figures. The working procedure is as follows:

Table 92--Sales of nonstore retailers (in millions of dollars), less SIC 5961 (part), based on the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
18,881	18,879	18,175	16,117	14,306	12,658

Tables 93--Percentage change from 1977 in sales of nonstore retailers, less SIC 5961 (part), expressed as a factor, based on the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.492	1.491	1.436	1.273	1.130	1.000

Table 94--Estimated VM sales of M&S (in millions of dollars), based on the CRT and moved by changes in sales of SIC 596 (part) as published in the ARTS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
3,741	3,741	3,601	3,193	2,835	2,508

Table 95--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 96--Percentage change from 1977 in VM sales of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.975	1.026	1.077	1.050	1.037	1.000

Table 97--Estimated VM food use (in million of pounds), based on the CRT and FSI, and moved by changes in real sales, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,709	1,800	1,888	1,841	1,817	1,753

Table 98--Estimated VM costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,455	1,455	1,401	1,242	1,103	976

### Military Services

The military is primarily classified in SIC 9711. Foodservice estimates are calculated for domestic operations.

Military feeding is divided into troop feeding in mess halls, and military personnel purchasing meals and snacks at clubs, exchanges, and through vending machines. Five data sets are used for the military services (MS). Two of these sets, the Consumer Price Index and the Producer Price Index, are described under separate eating places and elementary and secondary schools, respectively. The remaining three sets and their uses are:

1. Data on troop feeding are from unpublished information obtained from the Defense Personnel Support Center (DPSC). Data from the Defense Personnel

Support Center include food for domestic and overseas troop feeding. They do not include food purchased locally, estimated at 10 percent of troop feeding purchases by the Defense Personnel Support Center. According to the Defense Personnel Support Center, food purchases also do not include the value of food for troop feeding resulting from indefinite transfer contracts.

2. Statistics on the number of personnel stationed overseas and stateside, used to adjust the value of food for domestic troop feeding, are available from the Statistical Abstract.
3. Sales of meals and snacks at clubs, exchanges, and through vending machines were obtained separately from each service.

Estimates of food quantity are derived from the quantity/cost relationship (2.05 lbs. per food cost dollar) in the 1983 Agr. 188 report from the Defense Personnel Support Center. The Producer Price Index is used to calculate real costs for troop feeding while the Consumer Price Index is used for clubs, exchanges, and vending machines. A cost-to-sales factor of 0.5 is used to calculate a retail value for troop feeding and clubs, and a factor of 0.4 is used for exchanges and vending operations. Food quantity is estimated by multiplying real food costs by 5.36 (the pounds per real dollar of food costs). The working procedure is as follows:

Table 99--Estimated MS costs of M&S, based on data from DPSC and ATPC, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	<u>Million dollars</u>					
Troop feeding	813	793	733	696	624	611
Clubs	93	86	75	71	66	61
Exchanges	102	95	85	76	71	67
Vending	32	32	30	27	26	24

Table 100--Estimated MS sales of M&S, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
	<u>Million dollars</u>					
Troop feeding	1,625	1,587	1,466	1,392	1,249	1,221
Clubs	185	172	150	142	132	122
Exchanges	256	238	213	191	177	167
Vending	81	80	75	67	64	61

Table 101--PPI for finished consumer foods (1967=100), 1977-82.

<u>Index</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
PPI	259.3	253.6	239.5	226.2	207.2	189.9

Table 102--CPI for food away from home (1967=100), 1977-82.

<u>Index</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
CPI	306.5	291.0	267.0	242.9	218.4	200.3

Table 103--Real food costs for troop feeding and clubs and real food sales for exchanges and vending, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million dollars</u>						
Troop feeding	313	313	306	308	301	322
Clubs	30	30	28	29	30	30
Exchanges	33	33	32	31	32	33
Vending	12	12	11	11	11	11

Table 104--Estimated MS food use, moved by changes in real M&S costs and/or sales, 1977-82.

<u>KOB</u>	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Million pounds</u>						
Troop feeding	1,680	1,677	1,640	1,650	1,615	1,723
Clubs	162	158	151	157	162	163
Exchanges	179	175	171	169	174	179
Vending	57	59	60	59	63	65

#### Transportation

Transportation (trains, ships and boats, and airplanes) on which food service is provided domestically is classified in SIC 4011, 441-445, and 4511.

#### Air Transportation

Three data sets are used for air transportation (AT). The Consumer Price Index and the Foodservice Industry Survey are described under separate eating places. The remaining set is Recent Trends in Airline Cost Elements (RTACE), published by the Civil Aeronautics Board. Passenger food is a cost element included in this publication.

Recent Trends in Airline Cost Elements covers all certificated route carriers. Some noncertificated planes carry passengers, and presumably serve food. But, the amount served, if any, is not included in air transportation estimates. Because many carriers purchase fully prepared, ready to heat-and-serve food, the published food cost is used as the retail value. Only one-half the stated value is used for international flights because food for the return flight is not from domestic supplies.

The food value may include alcoholic beverages that are served without charge. A food-to-sales ratio of 0.4 is used to calculate food cost. An estimate of

food quantity, 0.6254 pounds of food per sales dollar, is derived from the cost/quantity relationship of cafeterias from the Foodservice Industry Survey. The working procedure is as follows:

Table 105--Estimated AT sales of M&S (in millions of dollars), with RTACE as the base, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
904	876	839	773	650	564

Table 106--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 107--Percentage change from 1979 in AT real sales of M&S, expressed as a factor, with RTACE as the base, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.927	0.946	0.987	1.000	0.935	0.885

Table 108--Estimated AT food use (in millions of pounds), based on the RTACE and FSI and moved by changes in real sales of M&S, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
448	457	477	483	452	427

Table 109--Estimated AT costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
362	350	336	309	260	226

### Water Transportation

Published and unpublished data sets from the Maritime Administration and the National Oceanic and Atmospheric Administration, including the U.S. Merchant Marine data sheet and daily operating costs of subsidized vessels, the Consumer Price Index, and Economic Research Service estimates are used for water transportation (WT).

The estimate for food quantity, 1.608 pounds of food per dollar of cost, is based on the cost/quantity relationship of cafeterias from the 1979 Foodservice Industry Survey. The cost-to-sales ratio of 0.389 is used to calculate the value of sales at retail. Annual quantity measures are moved based on changes in real food costs. The working procedure is as follows:

Table 110--Estimated WT costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
295	293	273	246	218	194

Table 111--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 112--Percentage change from 1979 in real costs of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.950	0.994	1.010	1.000	0.986	0.956

Table 113--Estimated WT food use (in millions of pounds), based on the FSI and moved by estimated changes in real costs of M&S, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
367	375	391	396	370	350

Table 114--Estimated WT sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
758	753	702	632	560	499

### Rail Transportation

Three data sets are used for rail transportation (RT). The Foodservice Industry Survey and the Consumer Price are described under separate eating places. The other data set is unpublished information from Amtrack on food and beverage revenue. Alcohol is excluded from the figures. Amtrack accounts for nearly all transportation of passengers by rail. An estimate of food quantity, 0.6254 pounds of food per sales dollar, is derived from the quantity/cost relationship for cafeterias from the Foodservice Industry Survey. A cost-to-sales ratio of 0.389 is used to calculate food costs. The working procedure is as follows:

Table 115--Estimated RT sales of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
23	27	22	21	15	16

Table 116--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 117--Percentage change from 1979 in RT real sales of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.868	1.073	0.953	1.000	0.794	0.924

Table 118--Estimated RT food use (in millions of pounds), based on the FSI and data from Amtrak and moved by changes in real RT sales, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
11	14	12	13	10	12

Table 119--Estimated RT costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
9	11	8	8	6	6

#### Associations

Associations that provide food service include membership organizations engaged in civic, social, and fraternal activities, and organization hotels and lodging houses operated for the benefit of their constituents, and not open to the general public. These establishments are classified in SIC 7041 and 8641.

Six data sets are used for associations (ASSO) to achieve the study objectives. The Census of Retail Trade, the Foodservice Industry Survey, and the Consumer Price Index are described under separate eating places. The Census of Service Industries is described under lodging places. The two remaining sets and their uses are:

1. Personal consumption expenditures (PCE) are regularly available from the Bureau of Labor Statistics for establishments similar to civic, social, and fraternal associations (SIC 8641), and organization lodging houses for members (SIC 7041). Data for SIC 8641 from the Personal Consumption Expenditures series are used to move base period expenses of SIC 8641 from the Census of Service Industries. Meal and snack expenditures, 0.224 of estimated expenses, are then computed. This percentage was estimated by multiplying the percent of total expenses accounted for by merchandise revenue (26.8 percent: see the Census of Service Industries) by the percent of SIC 58 sales of food and alcohol accounted for by meal and snack sales (83.6 percent: see the Census of Retail Trade). Data from the Census of Service Industries) and Personal Consumption Expenditures for SIC 7041 are used in conjunction with information from the Digest of Education Statistics, explained in the following paragraph.

2. Statistics on room and board fees are published annually in the Digest of Education Statistics by the Department of Education. The ratio of the board fee to the total of the room and board fee is determined using these data. Meal and snack revenue for SIC 7041 is computed by multiplying expenses for SIC 7041 from the 1977 Census of Service Industries by the board fee ratio. Annual meal and snack estimates are based on changes in Personal Consumption Expenditures.

Meal and snack sales at associations are the sum of those in SIC 8641 and 7041. The cost-to-sales ratio of 0.412 from the Foodservice Industry Survey is used to calculate meal and snack costs. Real meal and snack receipts at associations are used to move food use estimates of 0.5447 pounds per sales dollar from the 1979 Foodservice Industry Survey. The working procedure is as follows:

Table 120--ASSO expenses (in millions of dollars) from the 1977 CSI.

Total	3,878
SIC 8641	3,606
SIC 7041 tax exempt	220
SIC 7041	52

Table 121--PCE for SIC 8641 (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
2,751	2,521	2,278	2,072	1,921	1,813

Table 122--Percentage change from 1977 in SIC 8641 expenditures, expressed as a factor, based on the PCE, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.517	1.391	1.256	1.143	1.060	1.000

Table 123--SIC 8641 expenses (in millions of dollars), with CSI as the base and moved by changes in the PCE, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
5,472	5,014	4,531	4,121	3,821	3,606

Table 124--SIC 8641 receipts from M&S (in millions of dollars), based on the CSI (as moved by changes in the PCE for SIC 8641) and the estimated percent accounted for by M&S, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,226	1,123	1,015	923	856	808

Table 125--PCE for SIC 7041 (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
381	342	316	303	286	308

Table 126--Percentage change from 1977 in SIC 7041 expenditures, expressed as a factor, based on the PCE, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.237	1.110	1.026	0.984	0.929	1.000

Table 127--College room and board fees, respectively, and the proportion of these fees accounted for by the board fee, based on the DES, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
<u>Dollars</u>					
973	858	771	720	671	630
1,107	997	911	850	805	768
<u>Proportion</u>					
.532	.537	.542	.541	.545	.549

Table 128--Estimated SIC 7041 M&S revenue (in millions of dollars), based on the CSI, annual changes in the PCE from 1977, and board fees from DES, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
186	152	138	135	138	149

Table 129--Estimated ASSO sales of M&S (in millions of dollars), based on the CSI and FSI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,412	1,275	1,153	1,058	994	957

Table 130--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 131--Percentage change from 1979 in ASSO real sales of M&S, expressed as a factor, with CSI as the base, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.056	1.004	0.990	1.000	1.043	1.095

Table 132--Estimated ASSO use of food (in millions of pounds), based on the FSI and moved by estimated changes in real receipts of M&S, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
608	579	570	576	601	631

Table 133--Estimated ASSO costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
582	525	475	436	409	394

Correctional Institutions

Correctional institutions include food service in juvenile correctional homes and in institutions for the confinement and correction of offenders. This category is in SIC 9223 and 8361 (part).

Published and unpublished data from the Bureau of Prisons, American Correctional Association, Bureau of Justice Statistics Bulletin, Bureau of Census, the Producer Price Index (described under elementary and secondary schools), and Economic Research Services estimates are used to achieve study objectives for correctional institutions (CI).

Estimates for food quantity are derived from the cost/quantity relationship of cafeterias from the 1979 Foodservice Industry Survey. A ratio of 0.5 is used for this market to calculate the retail value. Annual quantity measures are moved based on changes in real food costs. The working procedure is as follows:

Table 134--Estimated CI costs of M&S (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
508	392	352	312	283	246

Table 135--PPI for finished consumer foods (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
259.3	253.6	239.5	226.2	207.2	189.9

Table 136--Percentage change in CI real food costs from 1979, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.418	1.120	1.063	1.000	0.987	0.937

Table 137--Estimated CI food use (in millions of pounds), based on the FSI and moved by changes in real food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
733	579	550	517	511	484

Table 138--Estimated CI sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1,016	785	703	625	565	491

### Child Day-care Facilities

Child day-care facilities include food service in establishments primarily engaged in the care of infants and children where medical or delinquency correction is not a major element. Included are establishments in SIC 8351.

Three sets of data are used for child day-care facilities (CDC). The Producer Price Index and the school survey are described under elementary and secondary schools. The remaining set consists of published and unpublished data from the Food and Nutrition Service on Federal food costs for child care in homes and centers. An additional undetermined amount was probably expended by the private sector.

Data from the school survey on the cost and quantity of foods received are used as benchmarks for child day-care facilities. A factor of 0.5 was used for this market to calculate a retail value. The working procedure is as follows:

Table 139--CDC food costs (in millions of dollars), based upon FNS data, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
304	321	235	184	150	125

Table 140--PPI for finished consumer foods (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
259.3	253.6	239.5	226.2	207.2	189.9

Table 141--Percentage change from 1977 in CDC real costs of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.785	1.927	1.494	1.238	1.100	1.000

Table 142--Estimated CDC food use (in millions of pounds) based upon FNS and school data, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
663	716	555	460	408	371

Table 143--Estimated CDC sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
607	641	469	367	299	249

## Other

This group includes elderly feeding programs, unclassified under Standard Industrial Classification, and religious organizations and boarding houses, classified in SIC 7021 and 8661.

### Elderly Feeding Programs

Five data sets are used for elderly feeding programs (EFP) to achieve study objectives. The Foodservice Industry Survey and the Producer Price Index are described under separate eating places and elementary and secondary schools, respectively. The remaining three sets and their uses are:

1. Costs for congregate and home delivered meals are available from the Administration on Aging (AOA). Costs include food, labor, plates, utensils, etc. Food costs are estimated at 0.5 of total meal costs.
2. Total meals and the number of Title III meals (eligible for cash and commodities from USDA) are available from the Administration on Aging.
3. The reimbursement per meal is distributed by the Food and Nutrition Service as cash (about 90 percent or more) and commodities under Title III.

Estimates of food quantity are derived from the quantity/cost relationship for care facilities from the 1979 Foodservice Industry Survey. A ratio of 0.5 is used for elderly feeding programs to estimate the retail value of meals and snacks. Annual quantity and food cost estimates are moved by changes in number of meals served. Food costs are adjusted further by changes in the Producer Price Index. The working procedure is as follows:

Table 144--Number of meals served at EFP (in millions), based on the AOA, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
190	187	168	155	134	101

Table 145--Cost per meal adjusted by changes in the PPI from 1979, expressed as a factor, (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.01	0.99	0.94	0.88	0.81	0.74

Table 146--Food costs (in millions of dollars), excluding reimbursable costs under Title III, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
192.6	185.4	157.3	137.0	108.5	75.0

Table 147--Reimbursement rate (in cents per Title III meal), from FNS, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
51.5	47.25	43.00	38.50	29.25	27.25

Table 148--Number of meals served at EFP under Title III, (in millions), based on the AOA, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
188	183	164	148	128	96

Table 149--Reimbursable food costs under Title III, (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
96.82	86.47	70.52	56.98	37.44	26.16

Table 150--Total food costs at EFP (in millions of dollars), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
289	272	228	194	146	101

Table 151--PPI for finished consumer foods (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
259.3	253.6	239.5	226.2	207.2	189.9

Table 152--Percentage change from 1979 in EFP real costs of M&S, expressed as a factor, 1972-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.301	1.250	1.109	1.000	0.821	0.621

Table 153--Estimated EFP food use (in millions of pounds), based on the FSI and moved by changes in real food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
330	317	281	253	208	157

Table 154--Estimated EFP sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
579	544	456	388	292	202

## Religious Organizations

Three data sets are used for religious organizations (RO). The Foodservice Industry Survey and the Consumer Price Index are described under separate eating places. The remaining set consists of the County Business Patterns (CBP), published annually by the Bureau of the Census. County Business Patterns provides statistics on establishment numbers, employment, and wages.

Benchmark estimates for food costs are from the 1965 Foodservice Industry Survey. The estimate for food quantity is derived from the cost/quantity relationship for care facilities. A ratio of 0.5 is used for this market to calculate the retail value. Estimates are moved by changes in number of establishments and food prices. The working procedure is as follows:

Table 155--Number of RO, based on CBP, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
55,882	55,940	55,998	56,350	56,430	56,712

Table 156--Percentage change in RO from 1979, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.992	0.993	0.994	1.000	1.001	1.006

Table 157--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 158--Percentage change in CPI from 1979, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.262	1.198	1.099	1.000	0.899	0.825

Table 159--Estimated RO costs of M&S (in millions of dollars), based on the FSI and moved by changes in the RO and CPI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
88	84	77	71	64	59

Table 160--Percentage change from 1979 in RO real costs of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.992	0.993	0.944	1.000	1.001	1.006

Table 161--Estimated RO food use (in millions of pounds), based upon the FSI and moved by changes in real food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
85	85	85	86	86	86

Table 162--Estimated RO sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
177	168	154	141	127	117

### Boarding Houses

Three data sets are used for boarding houses (BH): the Foodservice Industry Survey, the Consumer Price Index, and the County Business Patterns. They are described under separate eating places and religious organizations.

Benchmark estimates for food cost values are from the 1965 Foodservice Industry Survey. The estimate for food quantity is derived from the cost/quantity relationship for care facilities. A ratio of 0.5 is used for this market to calculate retail value. Estimates are moved by changes in number of establishments and food prices. The working procedure is as follows:

Table 163--Number of BH, based on CBP, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978<sup>1/</sup></u>	<u>1977<sup>1/</sup></u>
1,800	1,856	1,914	2,029	2,151	2,280

Table 164--Percentage change in BH from 1979, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.887	0.915	0.943	1.000	1.060	1.124

Table 165--CPI for food away from home (1967=100), 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
306.5	291.0	267.0	242.9	218.4	200.3

Table 166--Percentage change in CPI from 1979, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
1.262	1.198	1.099	1.000	0.899	0.824

<sup>1/</sup> Estimated by ERS using a factor of 1.06 based on 1979-80 CBP figures. Necessitated by change in definitions and methods of obtaining statistics.



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Table 167--Estimated BH costs of M&S (in millions of dollars), based on the FSI and moved by changes in the CBP and CPI, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
20	20	19	18	17	17

Table 168--Percentage change from 1979 in BH real costs of M&S, expressed as a factor, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
0.887	0.915	0.943	1.000	1.060	1.124

Table 169--Estimated BH food use (in millions of pounds), based on the FSI and moved by changes in real food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
20	20	21	22	23	25

Table 170--Estimated BH sales of M&S (in millions of dollars), based on food costs, 1977-82.

<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
41	40	38	36	35	34



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